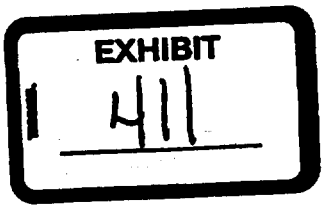
16913

SAAD SITE STEERING COMMITTEE

11 9 0037



February 21, 1995

Mr. Andrew Harrison
Office of Regional Counsel
U.S. EPA Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365

Mr. Fred Stroud
Senior On-Site Coordinator
U.S. EPA Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365

Re: Saad Trousdale Drive Site, Nashville, Tennessee
Supplement to February 10, 1995 letters

Gentlemen:

The Saad Site Steering Committee's technical consultants have reviewed the voluminous soil sampling and analytical data generated from the Site during the several investigations that the Committee has conducted. This review focused on the hazardous substances specifically mentioned as a concern by Mr. Stroud in his January 21, 1995 letter (TCE, toluene, xylene, and vinyl chloride) as well as total VOCs. Enclosed are five charts that have been prepared to reflect this data. The samples have been numbered, based on total VOCs, from 1 (highest total VOCs) to 56 (lowest total VOCs). Also enclosed is a map of the Site showing the location of the samples by these sample numbers.

Please bear in mind that these charts reflect samples that were taken after the original removal in 1990. During that removal, extensive above-ground and surface materials were removed from the Site.

The information on these charts demonstrate the following:

- Of the total VOC concentrations, 25 of the highest 26 samples are from areas that have been excavated and removed in previous removals; the one sample

from an area that has not been removed (No. 10) was from soil that is above groundwater (sampled at 2.5 ft.).

- Except for that sample, the highest total VOC concentration from a sample that remains on-site is only 50.8 ppm.

- Of the TCE concentrations, 9 of the highest 10 samples are from areas that have been excavated and removed in previous removals; the one sample from an area that has not been removed (No. 10) was from soil that is above groundwater (sampled at 2.5 ft.).

- Except for that sample, the highest TCE concentration from a sample that remains on-site is only 3.6 ppm.

- Of the toluene concentrations, 20 of the highest 21 samples are from areas that have been excavated and removed in previous removals; the one sample from an area that has not been removed (No. 10) was from soil that is above groundwater (sampled at 2.5 ft.).

- Except for that sample, the highest toluene concentration from a sample that remains on-site is only 27 ppm.

- Of the xylene concentrations, 20 of the highest 21 samples are from areas that have been excavated and removed in previous removals; the one sample from an area that has not been removed (No. 10) was from soil that is above groundwater (sampled at 2.5 ft.).

- Except for that sample, the highest xylene concentration from a sample that remains on-site is only 20 ppm.

- Vinyl chloride was detected in only two samples, both of which are from areas that have been excavated and removed during previous removals.

Also enclosed are sample data from the TCLP analyses that have been run on sludge samples. (Sludge samples have been analyzed only for disposal characterization. No total constituent analyses have been performed on sludge samples.) These samples were non-detect for all of the volatiles tested, including TCE and vinyl chloride. From this it necessarily follows that the presence of sludge does not necessarily indicate the presence of elevated levels of the contaminants of concern to Mr. Stroud.

None of this is new information. All of it was available last summer when EPA and the Steering Committee agreed upon the location and scope of the most recent removal conducted by the Steering Committee. Likewise, all of it was available when EPA and Alcoa agreed on the location and extent of the removal action conducted by Alcoa. All of

the areas of highest contamination that remained on the property as of last summer have been removed.

11 9 0039

I look forward to discussing this with you.

Sincerely,

SAAD SITE STEERING COMMITTEE

By: Andrew Goddard
J. Andrew Goddard,
Chairman of the Executive Committee

JAG:jlu

Enclosures

cc w/ enclosures:
Mr. Shane Hitchcock
Mr. Richard Green
Mr. Joseph Franzmathis
Mr. Patrick M. Tobin
Mr. John H. Hankinson, Jr.
Ms. Wilda W. Cobb
Mr. T. Anthony Quinn
Mr. Robert C. Watson

345303

1	11,000	REMOVED	
2	9,162	REMOVED	<10,000 ppm
3	7,695	REMOVED	
4	6,410	REMOVED	
5	3,167	REMOVED	
6	2,670	REMOVED	
7	2,268	REMOVED	
8	1,958	REMOVED	
9	1,815	REMOVED	
10	1,037	Left for RI/FS *	
11	968	REMOVED	<1,000 ppm
12	864	REMOVED	
13	475	REMOVED	
14	426	REMOVED	
15	282	REMOVED	
16	276	REMOVED	
17	276	REMOVED	
18	166	REMOVED	
19	77.9	REMOVED	<100 ppm
20	77.6	REMOVED	
21	77.0	REMOVED	
22	71.5	REMOVED	
23	63.8	REMOVED	
24	56.3	REMOVED	
25	53.0	REMOVED	
26	50.8	REMOVED	
	All below are < 51 ppm		
27	50.8	Left for RI/FS	
28	48.8	Left for RI/FS	
29	42.2	REMOVED	
30	41.1	Left for RI/FS	
31	33.6	REMOVED	
32	30.4	Left for RI/FS	
33	29.2	Left for RI/FS	
34	28.2	Left for RI/FS	
35	25.7	Left for RI/FS	
36	18.3	Left for RI/FS	
37	15.1	Left for RI/FS	
38	11.1	Left for RI/FS	
39	3.00	REMOVED	<10 ppm
40	2.57	Left for RI/FS	
41	2.22	Left for RI/FS	
42	2.10	Left for RI/FS	
43	2.05	Left for RI/FS	
44	0.684	REMOVED	<1 ppm
45	0.302	Left for RI/FS	
46	0.238	Left for RI/FS	
47	0.206	Left for RI/FS	
48	0.178	REMOVED	
49	0.110	REMOVED	
50	0.099	Left for RI/FS	
51	0.085	Left for RI/FS	
52	0.027	Left for RI/FS	
53	ND	Left for RI/FS	
54	ND	Left for RI/FS	
55	ND	Left for RI/FS	
56	ND	Left for RI/FS	
57	ND	Left for RI/FS	

* above groundwater - sampled at 2.5 ft.
(sample in same area at 5 ft. had 0.206 ppm)

Location	ppm	Status	
1	3,300	REMOVED	
7	650	REMOVED	<1,000 ppm
3	460	REMOVED	
2	420	REMOVED	
12	280	REMOVED	
13	38	REMOVED	<100 ppm
10	31	Left for RI/FS *	
26	27	REMOVED	
22	6.9	REMOVED	<10 ppm
5	3.8	REMOVED	
All below are < 3.7 ppm			
27	3.6	Left for RI/FS	
30	2.5	Left for RI/FS	
29	2.1	REMOVED	
18	1.9	REMOVED	
14	1.8	REMOVED	<1 ppm
24	0.62	REMOVED	
44	0.13	REMOVED	
36	0.070	Left for RI/FS	
48	0.026	REMOVED	
45	0.011	Left for RI/FS	
52	0.011	Left for RI/FS	
51	0.010	Left for RI/FS	

* above groundwater - sampled at 2.5 ft.
(sample in same area at 5 ft. was ND)

Location	ppm	Status	
2	5200	REMOVED	
1	4400	REMOVED	
3	4400	REMOVED	
4	4100	REMOVED	
5	1900	REMOVED	
6	1800	REMOVED	
8	1400	REMOVED	
9	1400	REMOVED	
7	1200	REMOVED	
11	640	REMOVED	<1,000 ppm
12	280	REMOVED	
14	265	REMOVED	
10	230	Left for RI/FS *	
13	210	REMOVED	
15	160	REMOVED	
16	150	REMOVED	
17	150	REMOVED	
18	64	REMOVED	<100ppm
19	52	REMOVED	
23	38	REMOVED	
24	27	REMOVED	
All below are < 28 ppm			
27	27	Left for RI/FS	
31	26	REMOVED	
28	22	Left for RI/FS	
21	21	REMOVED	
30	21	Left for RI/FS	
29	17	REMOVED	
33	14	Left for RI/FS	
32	13	Left for RI/FS	
34	13	Left for RI/FS	
26	12	REMOVED	
20	10	REMOVED	
22	5.5	REMOVED	<10 ppm
25	5.0	REMOVED	
38	3.5	Left for RI/FS	
39	3.0	REMOVED	
42	2.1	Left for RI/FS	
35	1.6	Left for RI/FS	
40	1.4	Left for RI/FS	
43	0.67	Left for RI/FS	<1 ppm
41	0.41	Left for RI/FS	
44	0.40	REMOVED	
36	0.14	Left for RI/FS	
49	0.11	REMOVED	
48	0.098	REMOVED	
47	0.032	Left for RI/FS	
45	0.022	Left for RI/FS	
50	0.022	Left for RI/FS	
37	0.016	Left for RI/FS	
46	0.016	Left for RI/FS	
51	0.014	Left for RI/FS	

* above groundwater - sampled at 2.5 ft.
(sample in same area at 5 ft. had 0.032 ppm)

Location	ppm	Status	
1	1,600	REMOVED	
3	1,100	REMOVED	
2	1,000	REMOVED	
4	990	REMOVED	<1,000 ppm
6	870	REMOVED	
5	710	REMOVED	
8	440	REMOVED	
7	320	REMOVED	
9	320	REMOVED	
10	300	Left for RI/FS *	
11	260	REMOVED	
14	150	REMOVED	
13	120	REMOVED	
16	110	REMOVED	
17	110	REMOVED	
15	100	REMOVED	
21	40	REMOVED	<100ppm
25	39	REMOVED	
12	35	REMOVED	
19	21	REMOVED	
23	21	REMOVED	
	All below are < 21 ppm		
35	20	Left for RI/FS	
24	19	REMOVED	
29	19	REMOVED	
18	16	REMOVED	
32	15	Left for RI/FS	
27	13	Left for RI/FS	
33	13	Left for RI/FS	
36	13	Left for RI/FS	
28	10	Left for RI/FS	
34	10	Left for RI/FS	
30	8.6	Left for RI/FS	<10 ppm
20	6.5	REMOVED	
26	6.3	REMOVED	
31	6.1	REMOVED	
38	2.0	Left for RI/FS	
41	1.6	Left for RI/FS	
22	1.2	REMOVED	
43	1.1	Left for RI/FS	
40	0.82	Left for RI/FS	<1 ppm
44	0.40	REMOVED	
47	0.088	Left for RI/FS	
50	0.046	Left for RI/FS	
48	0.034	REMOVED	
45	0.022	Left for RI/FS	
37	0.012	Left for RI/FS	
46	0.012	Left for RI/FS	

* above groundwater - sampled at 2.5 ft.
(sample in same area at 5 ft. had 0.088 ppm)

Location	ppm	Status
2	20.0	REMOVED
5	6.0	REMOVED

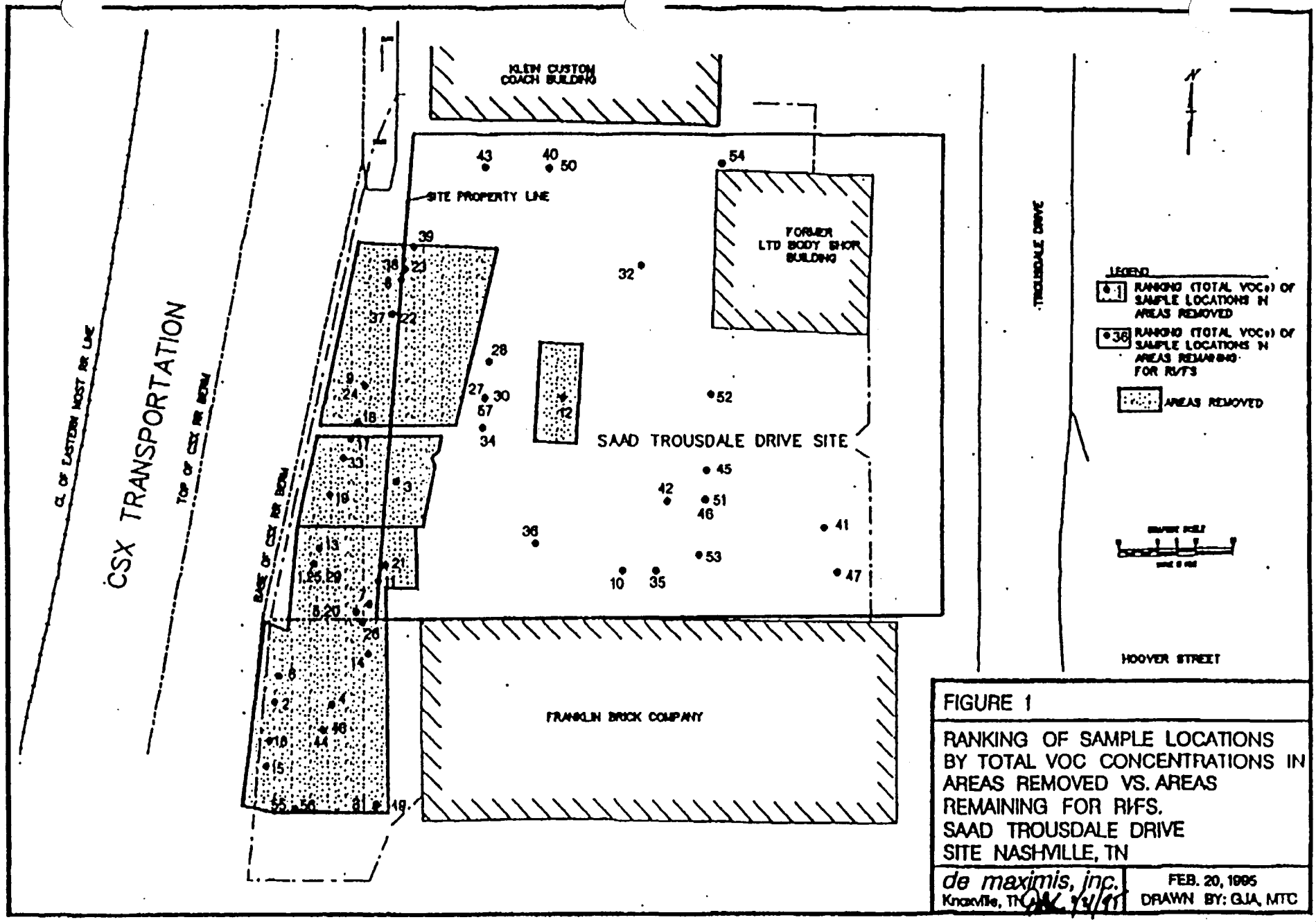


FIGURE 1

RANKING OF SAMPLE LOCATIONS BY TOTAL VOC CONCENTRATIONS IN AREAS REMOVED VS. AREAS REMAINING FOR RI/FS.
SAAD TROUSDALE DRIVE SITE NASHVILLE, TN

de maximis, inc.
Knoxville, TN

FEB. 20, 1995
DRAWN BY: GJA, MTC

Nashville, Tennessee 37209

Collection Date		Time	Received
10/21/92	11 9 0046	00:00	10/21/92

Referring Client	Client ID	Reported
JOE PUTNAM	SAAD	10/31/92

Test	Result	Units	Reference Limits
PCB (SOLID MATRIX)			
PCB 1016	<1000	PPM	
PCB 1221	<1000	PPM	
PCB 1232	<1000	PPM	
PCB 1242	<1000	PPM	
PCB 1248	<1000	PPM	
PCB 1254	<1000	PPM	
PCB 1260	<1000	PPM	
TCLP ZHE EXTRACTION	10/23/92		
T.C.L.P. EXTRACTION	10/23/92		
TCLP METALS			
METHOD NUMBER	6010/7740/7470/7060		
ARSENIC	<0.10	PPM	
BARIUM	4.78	PPM	
CADMIUM	<0.10	PPM	
CHROMIUM, TOTAL	<0.50	PPM	
LEAD	0.56	PPM	
MERCURY	<0.010	PPM	
SELENIUM	<0.10	PPM	
SILVER	<0.10	PPM	
TCLP VOLATILES			
METHOD NUMBER	8240		
BENZENE	<0.10	PPM	
CARBON TETRACHLORIDE	<0.10	PPM	
CHLOROBENZENE	<0.10	PPM	
CHLOROFORM	<0.10	PPM	
1,2-DICHLOROETHANE	<0.10	PPM	
1,1-DI-CL-ETHYLENE	<0.10	PPM	
2-BUTANONE (MEK)	<1.0	PPM	
TETRACHLOROETHYLENE	<0.10	PPM	
TRICHLOROETHYLENE	<0.10	PPM	
VINYL CHLORIDE	<0.10	PPM	
TCLP EXTRACTABLES			
METHOD NUMBER	8270		
PYRIDINE	<0.10	PPM	
O-CRESOL	<0.10	PPM	

DRE ENVIRONMENTAL SERVICES INC
ATT. JOE PUTNAM
P.O. BOX 987
BRENTWOOD TN 37027 4437

500 12th Avenue South
Nashville, Tennessee 37203

Collection Date		Time	Receive
10/21/92	11 9 0047	00:00	10/21/9

Referring Client	Client ID	Reporte
JOE PUTNAM	SAAD	10/31/9

Test	Result	Units	Reference Limits
M-CRESOL	<0.10	PPM	
P-CRESOL	<0.10	PPM	
1,4-DICHLOROBENZENE	<0.10	PPM	
2,4-DINITROTOLUENE	<0.10	PPM	
HEXACHLOROBUTADIENE	<0.10	PPM	
HEXACHLOROETHANE	<0.10	PPM	
NITROBENZENE	<0.10	PPM	
PENTACHLOROPHENOL	<0.10	PPM	
2,4,5-TRICHLORPHENOL	<0.10	PPM	
2,4,6-TRI CL PHENOL	<0.10	PPM	
HEXACHLOROBENZENE	<0.10	PPM	
TCLP PESTICIDE/HERB			
METHOD NUMBER	8080		
CHLORDANE	<0.015	PPM	
ENDRIN	<0.010	PPM	
HEPTACHLOR	<0.005	PPM	
HEPTACHLOREPOXIDE	<0.005	PPM	
LINDANE	<0.20	PPM	
METHOXYCHLOR	<1.0	PPM	
TOXAPHENE	<0.25	PPM	
2 ',-D	<5.0	PPM	
2 S-TP(SILVEX)	<0.50	PPM	
SPIKE RECOVERY DATA			
*ARSENIC TCLP SPIKE	122	% REC	
*BARIUM TCLP SPIKE	93	% REC	
*CADMIUM TCLP SPIKE	95	% REC	
*CHROMIUM TCLP SPIKE	105	% REC	
*LEAD	108	% REC	
*MERCURY	108	% REC	
*SELENIUM	116	% REC	
*SILVER	96	% REC	
***VINYL CHLORIDE	82	% REC	
***1,1-DCE	93	% REC	
***1,2-DCA	81	% REC	
***CHLOROFORM	103	% REC	
***2-BUTANONE	64	% REC	

DRE ENVIRONMENTAL SERVICES INC
ATT. JOE PUTNAM
P.O. BOX 987
BRENTWOOD TN 37027 4437

[illegible] 12th Avenue South
Nashville, Tennessee 37203

Collection Date				Time	Received
10/21/92	11	9	0048	00:00	10/21/92

Referring Client	Client ID	Reported
JOE PUTNAM	SAAD	10/31/92

Test	Result	Units	Reference Limits
***CARBONTET	145	% REC	
***TCE	101	% REC	
***BENZENE	11	% REC	
***PCE	112	% REC	
***CHLOROBENZENE	112	% REC	
*PYRIDINE	55	% REC	
*O-CRESOL	88	% REC	
*M-CRESOL	75	% REC	
*P-CRESOL	75	% REC	
*1,4-DICHLOROBENZENE	75	% REC	
*2,4-DINITROTOLUENE	75	% REC	
*HEXACHLOROBUTADIENE	71	% REC	
*HEXACHLOROETHANE	81	% REC	
*NITROBENZENE	81	% REC	
*PENTACHLOROPHENOL	97	% REC	
*2,4,5-TRICHLOROPHEN	96	% REC	
*2,4,6-TRICHLOROPHEN	96	% REC	
*HEXACHLOROBENZENE	120	% REC	
*CHLORDANE	92	% REC	
*ENDRIN	70	% REC	
*HEPTACHLOR	96	% REC	
*[illegible]TACHLOR EPOXIDE	120	% REC	
*LINDANE	84	% REC	
*METHOXYCHLOR	56	% REC	
*TOXAPHENE	92	% REC	
**2,4-D	116	% REC	
**2,4,5-TP SILVEX	75	% REC	

TCLP preparation follows method 1311 SW-846 as revised June 29, 1990 (55 CFR 26986). All data is corrected from matrix spike recoveries.
APPROVED BY PAUL E. LANE, JR., LAS SUPERVISOR

DRE ENVIRONMENTAL SERVICES INC
ATT. JOE PUTNAM
P.O. BOX 987
BRENTWOOD TN 37027 4437

[illegible] Avenue South
Nashville, Tennessee 37203

Collection Date				Time	Receive.
10/14/92	11	9	0049	00:00	10/14/9:

Referring Client	Client ID	Reporte:
JOE PUTNAM	SAAD	10/18/9:

Test	Result	Units	Reference Limits
CLP ZHE EXTRACTION	10/15/92		
.C.L.P. EXTRACTION			
CLP METALS			
METHOD NUMBER	6010/7740/7470/7060		
ARSENIC	<0.10	PPM	
BARIUM	1.81	PPM	
CADMIUM	<0.10	PPM	
CHROMIUM, TOTAL	<0.50	PPM	
LEAD	<0.50	PPM	
MERCURY	<0.010	PPM	
SELENIUM	<0.10	PPM	
SILVER	<0.10	PPM	
CLP VOLATILES			
METHOD NUMBER	8240		
BENZENE	<0.10	PPM	
CARBON TETRACHLORIDE	<0.10	PPM	
CHLOROBENZENE	<0.10	PPM	
CHLOROFORM	<0.10	PPM	
1,2-DICHLOROETHANE	<0.10	PPM	
1,1-DI-CL-ETHYLENE	<0.10	PPM	
2-BUTANONE (MEK)	<1.0	PPM	
TE[illegible]CHLOROETHYLENE	<0.10	PPM	
TR[illegible]CHLOROETHYLENE	<0.10	PPM	
VINYL CHLORIDE	<0.10	PPM	
CLP EXTRACTABLES			
METHOD NUMBER	8270		
PYRIDINE	<0.10	PPM	
O-CRESOL	<0.10	PPM	
M-CRESOL	<0.10	PPM	
P-CRESOL	<0.10	PPM	
1,4-DICHLOROBENZENE	<0.10	PPM	
2,4-DINITROTOLUENE	<0.10	PPM	
HEXACHLOROBUTADIENE	<0.10	PPM	
HEXACHLOROETHANE	<0.10	PPM	
NITROBENZENE	<0.10	PPM	
PENTACHLOROPHENOL	<0.10	PPM	

E ENVIRONMENTAL SERVICES INC Telephone: 000 373 1373
T. JOE PUTNAM
O. BOX 967
EN[illegible]OOD TN 37027 4437

Nashville, Tennessee 37203

Collection Date			Time	Receive
10/14/92	11 9	0050	00:00	10/14/9

Referring Client	Client ID	Reporte
JOE PUTNAM	SAAD	10/18/9

Test	Result	Units	Reference Limits
2,4,5-TRICHLORPHENOL	<0.10	PPM	
2,4,6-TRI CL PHENOL	<0.10	PPM	
HEXACHLOROBENZENE	<0.10	PPM	
TCLP PESTICIDE/HERB			
METHOD NUMBER	8080		
CHLORDANE	<0.015	PPM	
ENDRIN	<0.010	PPM	
HEPTACHLOR	<0.005	PPM	
HEPTACHLOREPOXIDE	<0.005	PPM	
LINDANE	<0.20	PPM	
METHOXYCHLOR	<1.0	PPM	
TOXAPHENE	<0.25	PPM	
2,4,-D	<5.0	PPM	
2,4,5-TP(SILVEX)	<0.50	PPM	
SPIKE RECOVERY DATA			
*ARSENIC TCLP SPIKE	110	% REC	
*BARIUM TCLP SPIKE	86	% REC	
*CADMIUM TCLP SPIKE	84	% REC	
*CHROMIUM TCLP SPIKE	103	% REC	
*LEAD	106	% REC	
*MERCURY	94	% REC	
*SELENIUM	103	% REC	
*SILVER	89	% REC	
***VINYL CHLORIDE	98	% REC	
***1,1-DCE	110	% REC	
***1,2-DCA	108	% REC	
***CHLOROFORM	105	% REC	
***2-BUTANONE	124	% REC	
***CARBONTET	125	% REC	
***TCE	104	% REC	
***BENZENE	110	% REC	
***PCE	111	% REC	
***CHLOROBENZENE	110	% REC	
*PYRIDINE	38	% REC	
*O-CRESOL	47	% REC	
*M-CRESOL	42	% REC	

E ENVIRONMENTAL SERVICES INC Telephone: 000 373 1373
T. JOE PUTNAM
O. BOX 987
ENT WOOD TN 37027 4437

[illegible] Avenue South
Nashville, Tennessee 37203

Collection Date			Time	Received
10/14/92	11 9 0051		00:00	10/14/92
Referring Client			**Client ID**	**Reported**
JOE PUTNAM			SAAD	10/18/92

Test	Result	Units	Reference Limits
*P-CRESOL	42	% REC	
*1,4-DICHLOROBENZENE	49	% REC	
*2,4-DINITROTOLUENE	68	% REC	
*HEXACHLOROBUTADIENE	37	% REC	
*HEXACHLOROETHANE	44	% REC	
*NITROBENZENE	66	% REC	
*PENTACHLOROPHENOL	65	% REC	
*2,4,5-TRICHLOROPHEN	80	% REC	
*2,4,6-TRICHLOROPHEN	84	% REC	
*HEXACHLOROBENZENE	76	% REC	
*CHLORDANE	103	% REC	
*ENDRIN	105	% REC	
*HEPTACHLOR	104	% REC	
*HEPTACHLOR EPOXIDE	90	% REC	
*LINDANE	120	% REC	
*METHOXYCHLOR	80	% REC	
*TOXAPHENE	66	% REC	
**2,4-D	96	% REC	
**2,4,5-TP SILVEX	94	% REC	

TCLP preparation follows method 1311 SW-846 as revised June 29, 1990 (55 CFR 26986). All data is corrected from matrix spike recoveries.
APPROVED BY PAUL E. LANE, JR., LAB SUPERVISOR

RE ENVIRONMENTAL SERVICES INC Telephone: 000 373 1373
TT. JOE PUTNAM
.O.. BOX 987
RE WOOD TN 37027 4437